REMARKS

Independent claim 1 has been amended to further distinguish from the prior art. As amended, claim 1 indicates that the cross linker is added in an amount of between about 1 ppm to about 500 ppm based on the total amount of the reaction mixture. Support for this limitation may be seen, *inter alia*, at page 9, paragraph 28 of the specification.

All claims stand rejected on art-based grounds in light of EP '710 (Jaeger et al.) and U.S. Patent '674 (Whipple et al.). The Jaeger reference teaches that for many applications, the desired technical properties are better if the polyammonium salt has high molecular weight and is highly branched. (See for example, page 3, fourth paragraph of '710). Indeed, the drawing taken in conjunction with the Table 1 showing indicates that increasing the amount of cross-linker results in formation of more highly branched polyammonium salts. These highly branched structures are taught to exhibit better properties for applications such as sludge dewatering. See page 5, paragraph 5 of EP '710. Accordingly, the '710 reference does not at all teach or suggest utilization of the specific amounts of cross-linking monomer as now set forth in the instant claims.

The Whipple et al. patent relied upon by the Examiner, at Table 7 thereof, indicates that when the cross-linker is added alone at the later stages of the reaction, as the only structural modifier, it is shot-fed. In Tables 29 and 25 of Whipple et al., when the cross-linker is fed over time, it always is fed in combination with a chain transfer agent. Whipple et al. is accordingly deficient in making any teaching pertaining to cross-linker addition after about 50% or more monomer conversion by continuous addition of the cross-linker in the absence of any concurrent edition of chain transfer agent. This deficiency, coupled with the Jaeger et al. '710 deficiency in the lack of any suggestion or teaching of the now specified range for the cross-linking agent, indicates the non-obviousness of the instant claims. Simply stated, there is no direction in the prior art that would indicate that low level cross-linking agent addition, coupled with the specific cross-linking addition steps herein set forth in claim 1, would be expected to result in polymers having improved characteristics such as those shown in instant Example 5.

As further evidence of the unobvious nature of the solicited invention, the Examiner's kind attention is drawn to the Declaration of co-inventor Peltier, submitted in the parent application, Serial No. 10/287,236, now abandoned. Example 1 details acrylamide/AETAC synthesis wherein the cross-linker was added continuously after about 84% monomer conversion. No chain transfer agent was added at anytime. In contrast, in comparative Example 3, the cross-linker was shot fed after 72% monomer conversion. Also, in comparative Example 4, the cross-linker was continuously added from the beginning of the reaction through 94% monomer conversion. Table 2 on page 16 of the application indicates the clearly superior floc stability performance of the instant examples contrasted against the comparative examples.

The Declaration highlights the unexpected results shown by comparison of the acrylamide/AETAC copolymer made in accordance with Example 1 versus the comparative Example 3 acrylamide/AETAC copolymer. With regard to Table 1, the copolymer made in accordance with the invention has much higher viscosity than the C-3 comparative polymer. Floc stability efficacy results are shown in Table 2 of the Declaration. Here, floc stability ratings are consistently higher for the Example 1 copolymers.

All claims have been rejected on double patenting grounds in view of applicants' Serial No. 10/287,236. This rejection should now be withdrawn in light of the abandonment of Serial No. 10/287,236. The undersigned regrets any inconvenience caused by his oversight in failing to file an Express Abandonment in the parent application.

For all of the above reasons, the solicited claims are in full conformity with the Patent Office rules and regulations. The issuance of a Notice of Allowance is solicited.

The Examiner is respectfully requested to contact the undersigned at the telephone number below should any further questions arise during the course of reconsideration of this matter.

Respectfully submitted,

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